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(54) **CLOSED-LOOP METHOD FOR CONTROLLING INSULIN INFUSION**

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See application file for complete search history.

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(57) **ABSTRACT**

A closed loop infusion system controls the rate that fluid is infused into the body of a user. The closed loop infusion system includes a sensor system, a controller, and a delivery system. The sensor system includes a sensor for monitoring a condition of the user. The sensor produces a sensor signal, which is representative of the condition of the user. The sensor signal is used to generate a controller input. The controller uses the controller input to generate commands to operate the delivery system. The delivery system infuses a liquid into the user at a rate dictated by the commands from the controller. Preferably, the sensor system monitors the glucose concentration in the body of the user, and the liquid infused by the delivery system into the body of the user includes insulin.

4 Claims, 40 Drawing Sheets